NOTES.

The first *conversazione* of the Royal Society will be held at the Society's Rooms, Burlington House, on Wednesday next, May 14.

The Royal Geographical Society is to be congratulated on the brilliant reception accorded under its auspices to Mr. Stanley at the Albert Hall on Monday. All the arrangements had been made with the greatest care, and the proceedings were in every way most successful. No one who was fortunate enough to be present could fail to see how fully the English people recognize, and how warmly they appreciate, Mr. Stanley's achievements.

The Chancellor of the Exchequer will receive a deputation on May 15 from the Marine Biological Association of the United Kingdom in reference to the Treasury grant in aid of that Society's investigations of the natural history of marine food-fishes. A large monograph on the common sole, illustrated by many coloured plates, will be among the evidences of work done which the Association will submit to Mr. Goschen. The Fishmongers' Company have recently raised their contribution to the funds of the Association from £200 to £400 a year.

On Monday evening various questions as to the effects of the dog-muzzling order were addressed to Mr. Chaplin in the House of Commons. He said:—"The return of deaths from hydrophobia since the muzzling order came into force are not at present in the hands of the Board of Agriculture. But I am glad to say, with regard to rabies, that in every county which has been placed under the regulations, and in the country as a whole, there has been a marked diminution in the number of outbreaks since the passing of the order. For instance, in 1889, for the last two quarters of that year there were 133 cases in the third, and 81 cases in the fourth quarter reported to the Board. For the first quarter of the present year they have been reduced to 39, and for the month of April there have only been seven cases throughout England, as compared with 11 for March, 14 for February, and 14 for January of the present year. In the metropolis and the West Riding, although there has been a large diminution, cases are still of constant occurrence, and there have also been comparatively recent outbreaks in Hampshire and West Sussex, in which latter county a muzzling order has been imposed by the local authority. With regard to Lancashire and the home counties of Essex, Hertfordshire, Surrey, and Kent, so far as they are not included in the metropolitan district, no cases have been reported for a considerable period, and if the reports continue to be as favourable in the case of the home counties as they have been of late, I shall hope to be able to modify the order, if it is not suspended, at no distant time. I may be allowed to add, as it will be of interest to the public, that since the order has been enforced, of the rabid dogs seized in public places, nine were properly and securely muzzled, and were thus prevented from doing mischief."

Prof. G. J. Romanes, F.R.S., has been elected President of the Sunday Society, in succession to Sir James D. Linton, P.R.I., and will deliver his Presidential address at a meeting to be held in London in June.

The Pharmaceutical Society will hold a *conversazione* at its house on Tuesday evening, May 20.

The German Ornithological Society will hold its annual meeting at Berlin from May 9 to 12.

M. C. W. Rosset has arrived at Hamburg after having been absent in Egypt, Cochin China, and China for three years. He has made a most interesting scientific collection, which will be presented to the Ethnographical Museum of Berlin.

The recent investigations of Dr. Rudolf Kœnig, of Paris, into the composition of musical sounds and the theory of *timbre* will form the subject of an important paper to be read on May 16, at the meeting of the Physical Society, by Prof. Silvanus P. Thompson. Dr. Kœnig is sending over to this country for exhibition on this occasion a number of his wave-sirens and other expensive and elaborate apparatus, by which he has demonstrated the points of his research. Amongst the apparatus are some special appliances for producing audible beat-tones by the interference of two notes, each of which is too shrill to be separately heard. Musicians, as is well known, have never taken cordially to the current theories of Helmholtz respecting overtones and their relation to the consonance or dissonance of intervals and chords. As Dr. Kœnig's investigations have carried matters to a point beyond the speculations of Helmholtz, and not altogether in accordance with them, the occasion promises to be of unusual interest. It is expected that Dr. Kœnig will himself be present at the meeting, which is to be held at 6 o'clock at the Physical Laboratory of the Science Schools, South Kensington.

At the Royal Academy banquet on Saturday, Sir William Thomson responded for "Science." He spoke chiefly of the mutual obligations of science and art. Aërial perspective, he said, first became known to scientific men through the artist's practical knowledge, and the use made of it in every conceivable representation of light and darkness, of house interiors and exteriors.

The Select Committee on the sweating system refer in their Report to the evidence submitted to them as to the incompleteness of the education of workmen. "The remedies suggested," says the Committee, "are, on the one hand, a renewal of the apprenticeship system; and, on the other, the promotion of a larger system of technical education. We think that the encouragement of technical education for all classes of artisans is more likely to prove an efficient remedy than a recurrence to the old system of apprenticeship."

It is reported from the ruby mines of Burmah that a ruby weighing 304 carats has been found.

A public library is to be established at Hyderabad, and the Nizam's Government has also decided to undertake an archæological survey of the State.

Father Francis Denza, the Director of the new Vatican Observatory, is sending a circular in English to the Observatories of all English-speaking places, asking them to exchange publications with his institution. The authorities of the Vatican Observatory, which "now revives under the protection of His Holiness, Pope Leo XIII.," are anxious that it may render great service to science. Hence they feel the necessity of entering into communication with every existing scientific establishment of a similar kind. Father Denza expresses a hope that the directors to whom he appeals will let him have all the past publications of their respective Observatories.

Mr. W. C. Mills, Secretary of the Archæological Society of New Comerstown, Ohio, has found a Palæolithic flint implement in the gravel of the glacial terrace which everywhere lines the valley of the Tuscarawas river. Mr. G. F. Wright, to whom the implement was submitted, went to see the spot where it was discovered, and contributes to the *Nation* an interesting paper on his researches and conclusions. At this spot the surface of the terrace is thirty-five feet above the flood-plain of the Tuscarawas. The implement was found by Mr. Mills himself in undisturbed strata, fifteen feet below the surface of the terrace; so that it is "connected, beyond question, with the period when the terrace itself was in process of deposition." Thus it adds "another witness to the fact that man was in the valley of the Mississippi while the ice of the glacial period still lingered over a large part of its northern area." This is only the fifth locality in which similar discoveries have been made in America—the other places being Trenton, N.J.; Madisonville, Ohio; Medora, Ind.; and Little Falls, Minn.

At a recent meeting of the Washington Chemical Society, Dr. Thomas Taylor, of the United States Department of Agriculture, exhibited a new flash-light intended to take the place of several kinds which have proved highly dangerous. The composition, as described by *Science*, consists largely of charcoal made from the silky down of the milk-weed—a form of carbon which Dr. Taylor prefers to all others, because of its freedom from ash. A few grains of this composition placed on tissue-paper, and lighted by a "punk-match," produced a prompt and blinding flash. The paper on which the powder rested was not even scorched. The flash being instantaneous, the heat is not sufficient to ignite the most inflammable material on which the powder may rest. An inferior flash-light being used, with the same paper for a base, the paper at once caught fire. This was owing to the comparatively slow combustion of the chemicals used in the inferior grade. Dr. Taylor said the powder of his new flash-light would not explode either by concussion or by friction.

At the meeting of the French Meteorological Society on April 1, the President read a circular from the Minister of Public Instruction, with reference to the Congress of Scientific Societies to be held at the Sorbonne from May 27 to 31. The following questions to be discussed are those more particularly of interest to meteorologists:—The study of the mistral; earthquakes; researches on the presence of aqueous vapour in the air by astronomical and spectroscopic observations; comparison of the climates of the different parts of France; the causes which seem to induce a general decrease in the waters of the north of Africa, and a change of climate; to fix for certain localities of the Alps and Pyrenees the present superior limit of vegetation, and to study the variations which it has experienced at different epochs; the study of the periodical phenomena of vegetation, dates of budding, flowering, and maturation; coincidence of these epochs with that of the appearance of the principal species of insects injurious to agriculture.

The Meteorological Council have just published the monthly and annual results of the meteorological observations taken at the stations of the Royal Engineers and the Army Medical Department, for the years 1852–86, comprising thirty-three stations, in different parts of the world. In the year 1852, meteorological instruments were supplied to the principal foreign stations of the Royal Engineers, and the observations were continued till March 1862, when the instruments were transferred to the Army Medical Department, as directions had been given by the War Office for similar observations to be taken by the medical officers in the Army, wherever stationed. The observations were partially published by the Board of Ordnance and the War Office, but as it was pointed out in the *Meteorologische Zeitschrift* for March 1886, that it was "most desirable that this valuable store of observations, especially from stations for which hardly any other information for the period exists, should be worked up according to the modern requirements of the science, and then published," the Meteorological Council decided to undertake the work, and a large mass of original observations was handed over to that body. The result is the present volume of 261 + xiii. large quarto pages of carefully revised results for separate months and years. The combined results, for as many years as possible for each station, accompanied by a brief discussion of this valuable material, would no doubt be welcomed by meteorologists.

Dr. Dixon, Professor of Hygiene at the University of Pennsylvania, has been studying air and dust obtained in street cars. *Science* says he has found in them "the germs of many diseases, contagious and otherwise. Better ventilation and more effective cleansing are sorely needed."

In the current number of the *Zoologist*, Mr. E. L. Mitford writes of the survival of the beaver in Western Europe. Some fifteen years ago he saw in the museum at Bayonne a very large white beaver, which had been killed in the Rhone. He was told that it was the last of its race found in Europe. But this year, being at Hyères, where there is a museum with a very fine collection of indigenous birds and quadrupeds, he found another fine specimen, colour light brown, measuring three feet from snout to end of tail. This was obtained about four or five years ago, and is one of several that were sent to M. Fiépi, a naturalist and taxidermist of Marseilles. They were taken in the Rhone at St. Meree, in the neighbourhood of Arles. M. Catal, the naturalist of the Hyères Museum, talking of the subject with Mr. Mitford, said that beavers were more numerous formerly on the Rhone; that the great floods of 1846 had destroyed a large number, and made them more easily captured; and that subsequent inundations had made them much rarer. They are still to be found on the Rhone and its affluents, the Gardon, the Durance, and the Isère below Valence, also lower down the Rhone at Arles, Beaucaire, and Taralcon. They seem to have abandoned their custom of building huts and dams; the race no longer being sufficiently numerous to live in communities, they now live in deep burrows. In 1827 a number of the huts of the beaver were found on the Elbe at its meeting with the Nuthe, near Magdeburg.

The Director of the Norwegian Geological Survey, Dr. Hans Reusch, has lately published a small geological map of the Scandinavian peninsula, Finland, and Denmark. It includes also representations of Greenland, Iceland, Spitzbergen, and the Faroe Islands. The Norwegian terms used in the explanation of the colours are translated into English. The publishers are H. Aschehoug and Co., Christiania.

A work entitled "Dogs, Jackals, Wolves, and Foxes: a Monograph of the Canidæ," is being prepared by Mr. St. George Mivart, F.R.S. It will contain a description, with a plate drawn and coloured from nature, and often from life, of every species which the author thinks can fairly claim to be regarded as distinct, and also of various marked varieties of what he regards as probably one species. In addition to an account of the habits, geographical distribution, and life-history of each species, there will be given in an introduction, enriched with woodcuts, what the author deems a sufficient description of the anatomy of the group, of the structural relations of the Canidæ to other animals, their position in zoological classification, and the general relations they bear to the past and present history of this planet. The execution of the plates has been entrusted to Mr. J. G. Keulemans.

A new and most useful edition of the "Guide" to the exhibition galleries of the Department of Geology and Palæontology in the Natural History Museum, Cromwell Road, has been issued. In the preface, Dr. Henry Woodward explains that the publication of Mr. R. Lydekker's Museum Catalogues of the "Fossil Mammalia," parts i.–v. (1885–87), and the "Reptilia and Amphibia," parts i.–iv. (1888–89), has compelled the rearrangement of a great part of these collections, and changed the plan of the "Guide." Much additional information is given in the present edition, and the illustrations have been increased from 49 to 211. It has therefore been found necessary to subdivide the work into two parts. The first part deals with fossil mammals and birds, the second with fossil reptiles, fishes, and invertebrates.

Messrs. Neill and Co. have issued a volume giving a list of the contents of the first thirty-four volumes of the Transactions of the Royal Society of Edinburgh, with an index of authors and an index of subjects. The Society was founded in 1783, and published the first volume of its Transactions in 1789, adopting demy quarto as the size of the page. A slightly larger size has now been chosen, that the Society's Transactions may be uniform with those of the Royal Society. A new series may thus be said to have been begun. Messrs. Neill and Co., who have been printers to the Society since its foundation, present a copy of the volume to each member, "as a slight acknowledgment of their appreciation of the favour shown their firm for more than a century."

We have received the twentieth annual report of the Wellington College Natural Science Society. A good record of work in various departments is presented, and an account of some very interesting lectures is given in the "minutes of open meetings."

Some time ago the Japanese Minister of Education summoned a committee to discuss the system of building best adapted to withstand earthquakes. For the use of this committee, Prof. Milne, of Tokio, compiled a great quantity of information respecting building in earthquake countries. The various reports collected by him, with some original articles of his own, he has now brought together in a work which is printed as vol. xiv. of the Transactions of the Seismological Society of Japan. The compilation ought to be of great service to builders in countries where shocks of earthquake are frequently felt.

Messrs. Williams and Norgate have published a second edition of Mr. F. Howard Collins's "Epitome of the Synthetic Philosophy," which we recently reviewed. The work has been favourably received in America, and is being translated into French, German, and Russian.

A volume on the Paris Exhibition of 1889, by M. Henri de Parville, has just been published by M. J. Rothschild. It is pleasantly written, and illustrated by 700 vignettes.

The Geneva Society of Physics and Natural History has issued the second part of the thirtieth volume of its *Mémoires*. Besides the President's Report for 1888, a bibliographical bulletin, and a list of members, the volume contains papers on the movements of electrified bodies, by M. Ch. Cellérier; new or little-known locustides in the Museum of Geneva, by M. Alph. Pictet; on the flora of Paraguay, by MM. M. Micheli and R. Chadat; and on certain fossils of Japan, by MM. J. Brun and J. Tempère. The volume includes many illustrations.

Messrs. Macmillan and Bowes, Cambridge, have issued the first part of a Catalogue (No. 230) of books on the mathematics, pure and applied, containing many works of the old mathematicians, mathematical and astronomical journals, observations, &c., including many from the libraries of the late Arthur Buchheim, Fellow of New College, Oxford, and E. Temperley, Fellow of Queens' College, Cambridge.

A Catalogue of zoological and palæontological works has been issued by Messrs. Dulau and Co. It includes works on mammalia, and on anthropology and ethnography.

Prof. Everett sends us the following extract from the *East Anglian Daily Times*. It is by Mr. Herman Bidell, of Playford, who is well known in Suffolk, and is thoroughly competent to describe accurately phenomena he observes:—"I shall be glad to draw the attention of those interested in thunderstorms to a magnificent example of ruin by lightning we have in this village. The parish of Playford was visited on Saturday last (the 26th) by one of those volatile clouds heavily charged with electricity that so often remind us of the approach of summer. The tree struck stands about 300 yards north-east of the church, close by the footpath leading to Great Bealings, one of a row of 'old English' poplars running east and west. At the foot the tree is about 2½ feet in diameter, tapering more or less regularly to a 10-inch diameter at the top. Here the electric fluid came in contact with the trunk some 40 feet from the ground. The two topmost branches are intact, but the bark is completely stripped from top to bottom, the southern half of the body being riven into matchwood. The storm came up from north-west, with a very light breeze, shifting right and left of north. The cloud was a dense dark blue—the effect, in part, of the sun in front—a detached mass of vapour with fringed edges, differing little, except in density and its proximity to the earth, from others which during the forenoon had floated over. At half-past one o'clock a few drops warned four or five men at work close to the tree to take shelter under a stack 200 yards off—a fortunate warning, for no sooner had the cloud drifted overhead than a blinding flash, accompanied by a terrific peal of thunder, left the tree a magnificent ruin, spread over not less than two acres of land, more or less covered with bark, branches, and riven trunk. One solid piece of 5½ pounds was picked up 126 yards away from the tree. Other *débris* lies 70 yards in an opposite direction, and as an evidence of still more inconceivable force, small pieces of riven trunk or bark, some under half an ounce in weight, were found right in the face of the wind, nearly 60 yards from the tree. What force could have been applied to such light particles is beyond comprehension. Nothing that I have ever seen effected by lightning approaches this ruin. Larger trees have been shivered in this parish, but I never saw a tree completely barked all round, with one half literally riven into fibre, leaving the other half of the trunk a whitened stem, still standing as a forty-feet shaft to be seen a mile away. (The remnant is a conspicuous object in a north-westerly direction all the way from a point east of the old Kesgrave Schools for half a mile towards Ipswich on the Martlesham and Rushmere roads). The electric fluid left the tree at the foot, following the direction of the fence for about 15 or 20 feet, threw up a sod about a foot square, and there pierced the soil into the earth. Four hundred yards in a direct line north-east of the tree stands Playford Mount, the residence of Mr. Kemp-West, a commanding object in the landscape. Here some half-dozen of the fine glass plates in the front windows are shattered to atoms, the result, I apprehend, of concussion from the report of the explosion. I have never known this effect from the severest storm in the neighbourhood, but the thunderclap is described as terrific. The tree, as standing, is worth going to see, and, I will add, is of easy access from the road past the church."

The *Engineer* and *Engineering* for May 2 contain much information concerning the proposed great tower in London. The drawings, plans, and designs of the competing schemes are now being exhibited in the Drapers' Hall, Throgmorton Street, E.C. *Engineering* appears to think that, if the tower is to pay, it must be provided with some attractions to bring the people again and again; and if these attractions could be raised 200 feet or 500 feet above the smoke, they would be immensely increased. The country cousin and the conscientious sight-seer would go to the summit, but the first stage would detain the bulk of the visitors. *Engineering* also observes that, in reviewing the various designs, we must frankly admit that none excels the Eiffel Tower in beauty and grace. No fewer than eighty-six competitors have sent in designs.

An interesting paper upon cyanogen iodide, CNI, is communicated to the current number of the *Berichte* by Drs. Seubert and Pollard, of the University of Tübingen. On account, probably, of the extremely poisonous nature of this compound, rendered even more dangerous by reason of its great volatility, little has hitherto been done towards completing its chemical history beyond a mere description of its more evident properties. Determinations either of its density or its melting-point appear never to have been attempted, and it was with the object of supplying these deficiencies that the work in the Tübingen Laboratory was undertaken. Everyone who has ever prepared this exceptionally beautiful substance for lecture or other purposes will remember the exquisite manner in which it sublimes, forming long, delicate, colourless, but very highly refractive needles, bridging over from side to side of the wide tube or flask in which the operation is performed. Often these elongated prisms attain the length of half a dozen inches or more, and frequently form an interlacing network among which may be seen perched here and there star-shaped or flower-like aggregates of the smaller crystals. Perhaps the most remarkable property of these crystals is to be found in the manner in which they re-sublime from one side of the vessel to the other according as their position is varied as regards the direction of the light which falls upon them. Drs. Seubert and Pollard prepared their specimens by the old method first used by Sir Humphrey Davy, the action of iodine upon mercuric cyanide, $Hg(CN)_2 + 2I_2 = HgI_2 + 2CNI$. About 10 grams of the finely-powdered and well-dried mixture of iodine and cyanide of quicksilver, in the proportion of one molecule of each so as to avoid the presence of much free iodine in the sublimate, was placed in a wide test-tube and interpersed with glass beads in order to render the mixture as porous as possible. The test-tube was then placed at the bottom of a wider glass tube closed at the lower end, and fitted at the upper with a calcium chloride drying tube to prevent access of moisture. The apparatus was then allowed to stand for about three days in a position where it could receive direct sunlight; at the end of this time the reaction was almost complete, the mixture being brilliant red from formation of mercuric iodide. The lower end of the tube was then placed in a hot water bath, when the iodide of cyanogen sublimed in the manner above described into the upper cooler part of the tube. In order to determine the melting point, small quantities were placed in capillary tubes and hermetically sealed, for if the upper end were left open, as is usually the case in taking a melting-point, the cyanide would simply volatilize without fusion. The melting-point was in this way found to be 146°·5 C., and the solidifying point 143°. The vapour-density was determined by Victor Meyer's method, and found to be 5·28, corresponding to the simple formula, CNI. The lowest temperature at which the substance becomes completely and rapidly converted to the gaseous condition appears to be about 250°. The iodide is therefore analogous to the simple bromide and chloride of cyanogen, CNBr and CNCl, and not to the triple polymers tri-cyanogen bromide and chloride, $C_3N_3Br_3$ and $C_3N_3Cl_3$.

The additions to the Zoological Society's Gardens during the past week include the Wild Boars (*Sus scrofa* jv.) bred in Scotland, presented by the Lord Hebrand Russell; a Ring-tailed Coati (*Nasua rufa* ♂) from the Argentine Republic, presented by Mr. R. E. Moore; a Louisianian Meadow Starling (*Sturnella ludoviciana* ♀) from North America, a Black-bellied Sand Grouse (*Pterocles arenarius* ♀) from India, presented by Mr. W. H. St. Quintin; four variegated Sheldrakes (*Tadorna variegata* ♂ ♂ ♂ ♂) from New Zealand, presented by Captain C. A. Findlay, R.N.R.; a Rhomb-marked Snake (*Psammophylax rhombeatus*) from South Africa, presented by Miss Harris; three Common Vipers (*Vipera berus*) from Sussex, presented by Dr. C. W. Cousens; a Green Lizard (*Lacerta viridis*), a Three-toed Skink (*Seps tridactylus*) from France, presented Mr. J. C. Warbury; a Sooty Phalanger (*Phalangista fuliginosa* ♂) from Australia, deposited; a Black-headed Lemur (*Lemur brunneus*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

Objects for the Spectroscope.

Sidereal Time at Greenwich at 10 p.m. on May 8 = 13h. 6m. 42s.

Name.	Mag.	Colour.	R.A. 1890.	Decl. 1890.
			h. m. s.	° ′
(1) G.C. 3321 (64 M) ...	—	—	12 51 19	+22 17
(2) G.C. 3572 (51 M) ..	—	—	13 25 13	+47 45
(3) 40 Comæ Ber. ...	6	Yellowish-red.	13 1 0	+23 12
(4) 91 Leonis...	5	Whitish-yellow.	11 30 48	+ 0 11
(5) α Virginis	1	White.	13 9 24	−10 36
(6) V Virginis	Var.	Yellow-red.	13 22 7	− 2 36

Remarks.

(1) The spectrum of this bright nebula does not appear to have been yet recorded. Smyth describes it as "a conspicuous nebula, magnificent in size and brightness." In the General Catalogue it is described as "a very remarkable object; very bright; very large; very much extended in the direction 120°; brightens in the middle to a small bright nucleus, which is possibly a double star." The nebula is in the constellation Coma Berenices, and is now very favourably situated for observations.

(2) This is the famous spiral nebula in Canes Venatici. The details of the nebula are so well-known that a full description is not necessary here. In all but the largest telescopes it simply appears as a double nebula with the two nebulosities running into each other, one of them being surrounded by a ring which is variable in brightness. Smyth likens this to a "ghost" of Saturn. According to Huggins the spectrum is continuous, but some parts were thought to be abnormally bright. Although the observations will not be easy, it is very important that the positions of such bright parts should be measured, if only approximately. In such cases as this it is probable that we shall find spectroscopic connecting links between the bright-line nebulæ and stars which are well advanced in condensation. Our knowledge of the relations between nebulæ and comets is also likely to be advanced in this way.

(3) This is a very fine star of Group II. The bands are very wide and dark, even in the ultra-blue, but especially in the red (Dunér). The star belongs to a late stage of the group, and may be usefully re-examined for further details.

(4) A star of the solar type (Vogel). The usual differential observations as to whether the star is increasing in temperature (Group III.), or decreasing (Group V.) are required. The spectra of this class of stars should be very carefully examined for remnants of the strong bands in the red, which characterize the later stages of Group II., and which are also seen in Aldebaran. If these are found, the star is obviously at an early stage of Group III. It has also become very important to determine whether there are any stars intermediate between stars like the sun and stars of Group VI., and in these more detailed observations this should be borne in mind. The carbon band near *b* will probably be the first to appear, and the presence or absence of traces of this band should be always noted. It is most likely to occur in stars of an orange or reddish tint.

(5) Spica has a spectrum of Group IV. The only observations likely to be of service are those comparing the thicknesses of such lines as *b*, E, and D with their thickness in other bright stars of the same group (*e.g.* α Lyræ). This will determine its relative temperature.

(6) This variable will reach a maximum about May 9. It ranges in magnitude from 8–9 at maximum, to <13 at minimum in a period of about 251 days. The spectrum is still doubtful; Gore writes it III.?

A. Fowler.

Structure of the Corona.—The Smithsonian Institution has had two plates prepared, containing nine photographs of the total eclipse of the sun of January 1, 1889, and distributed them amongst astronomers and others interested in solar physics. All the photographs have been reduced to a uniform diameter, and at Prof. Langley's request, Prof. Todd has contributed a descriptive note to accompany them. In the remarks on the structure of the corona it is noted:—

(1) The axis of symmetry of the corona does not coincide with the axis of revolution of the sun as determined from the solar